

III. REMARKS

1. Claims 1, 6-10, 12, 17-21, 23-24, and 29 are not unpatentable over the combination of Wood and Hallkvist et al. (U.S. 6055497) ("Hallkvist") under 35 U.S.C. 103(a).

Claim 1 recites that a speech frame is decoded. If the speech frame is "free of defects" it is inferred... whether the speech frame contains speech that is decodable by means of a speech decoder. This is not disclosed or suggested by the combination of Wood and Hallkvist.

The Examiner acknowledges that Wood does not disclose or suggest "determining whether the frame contains speech that is decodable by a speech decoder by using only at least one speech parameter and not from using channel codes." Referring to claim 1, this statement by the Examiner relates to the portion of the claim that states "it is inferred only from the value of at least one speech parameter in the channel decoded speech frame and not from using channel codes, whether the speech frame contains speech that is decodable by means of a speech decoded. Hallkvist does not disclose or suggest at least this feature.

FIG. 5 of Hallkvist discloses the use of a Voice Activity Detection ("VAD") to determine "whether an incoming signal contains speech information or not." (Col. 4, lines 24-27.) This is not what is claimed by Applicant.

Applicant recites determining if the speech frame is free of "defects" and whether the speech frame contains speech that is decodable by means of a speech detector. In Hallkvist, the VAD only determines when consecutive frames "containing no speech information" are detected. (Col. 4, lines 47-50). When "no voice activity for a certain number of frames" is detected by the VAD, the SID frame is stored. (see e.g. FIG 5, Col. 8, lines 22-25).

A VAD is defined in GSM recommendation 06.32 (see column 4, lines 5-13 of Hallkvist). A copy of this reference is enclosed. In general (see page 6 of GSM 06.32), the function of the VAD is to indicate whether each 20 ms frame produced by the speech encoder contains speech or not. In practice (see page 7 of GSM 06.32), the function of the VAD is to distinguish between (background) noise with speech present and noise without speech present. This is achieved by (see page 7 of GSM 06.32) comparing the energy of the filtered signal with a threshold: speech is indicated whenever the threshold is exceeded.

Clearly, the function of the VAD of Hallkvist cannot be equated with the features recited by Applicant in the claims, in which it is inferred whether the speech frame contains speech that is decodable by means of a speech decoder. The VAD disclosed by Hallkvist does not detect a defective speech frame, but considers it as either a frame with (background) noise with speech present, or a frame with noise without speech present. In Hallkvist, channel decoding or equalizing device marks the frames with background noise (Col. 5, lines 1-8). Claim 1 of Hallkvist also makes it clear that means (=VAD) for detecting if a signal contains speech information and means (channel decoder or equalizing device) for detecting if a frame has been corrupted or lost during transmission are two different devices.

The combination of Wood and Hallkvist is only capable of detecting whether the bad frame indication should be set and whether the frame contains speech or background noise. It is not capable of, and does not disclose or suggest, recognizing defective speech frames that pass the bad frame indication as non-defective frames. This is an advantage of the features claimed by Applicant, and is not disclosed or suggested by the combination of Wood and Hallkvist.

It is submitted that there is no motivation to combine these references to achieve what is claimed by Applicant since Hallkvist only discloses the use of a VAD to determine whether or not there is, or is not, speech activity. This is not what is claimed by Applicant. Thus, one would not be motivated to combine these references to achieve

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what is claimed by Applicant. Therefore, claims 1, 12, 23, and 24 should be allowable. Claims 6-10, 17-21 and 29 should be allowable at least by reason of their respective dependencies.

2. Claims 25-28 are not unpatentable over Wood in view of Hallkvist in view of Official Notice, at least by reason of their respective dependencies.

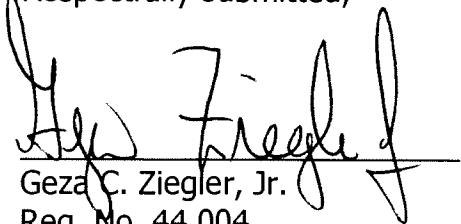
3. Claims 2-5 and 13-16 are not unpatentable over Wood in view of Hallkvist and further in view of Dunlop et al. at least by reason of their respective dependencies.

4. Claims 11 and 22 are not unpatentable over Wood in view of Hallkvist and Lagerqvist et al. at least by reason of their respective dependencies.

For all of the foregoing reasons, it is respectfully submitted that all of the claims now present in the application are clearly novel and patentable over the prior art of record, and are in proper form for allowance. Accordingly, favorable reconsideration and allowance is respectfully requested. Should any unresolved issues remain, the Examiner is invited to call Applicants' attorney at the telephone number indicated below.

The Commissioner is hereby authorized to charge for any fees associated with this communication or credit any over payment to Deposit Account No. 16-1350.

Respectfully submitted,



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